NOVEMBER/DECEMBER 2024

23UCS31 — PYTHON PROGRAMMING

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Mention two key features of Python.
2. What is the purpose of the append() method in Python arrays?
3. What is the purpose of the pass statement in Python?
4. Define an if statement and give a simple example?
5. What is a module in Python?
6. Define recursion in Python?
7. Name and explain any two list methods in Python.
8. How do you create a tuple in Python?
9. How to rename a file in Python. Provide an example?
10. How do you open a file in Python?

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Explain any four features of Python programming languages.

Or

(b) How are arrays defined in Python?

12. (a) Describe the function of nested for loop with an example.

Or

(b) Explain the function of if..else statement with an example.

13. (a) Explain the process of defining and calling a function in Python with an example.

Or

(b) Discuss any three built-in string methods in Python, providing examples for each.

14. (a) What are nested tuples in Python? Explain how to create and access nested tuples with examples?

Or

(b) Describe the various dictionary functions and methods in Python with an example.

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15. (a) Discuss the purpose and usage of the append() method in file handling.

Or

(b) Explain the process of renaming and deleting files in Python.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain Python's output and input functions. Discuss how input/output operations are handled in Python, providing examples of user interaction through the console?

17. Describe in detail how while and for loops are used for iteration in Python?

18. How do you define your own module in Python? Provide a simple example of creating and importing a user-defined module.

19. Explain the process of creating a list in Python. Discuss various methods for accessing and updating values in a list. Provide detailed code examples for each operation.

20. Discuss the different types of files that can be handled in Python and their modes.

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